

## REQUEST FOR ACCESS OF ABANDONED APPLICATION UNDER 37 CFR 1.14(a)

In re Application of \_\_\_\_\_

Application Number

Filed

07/566977

8/13/90

Group Art Unit

Examiner

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I hereby request access under 37 CFR 1.14(a)(3)(iv) to the application file record of the above-identified ABANDONED application, which is: (CHECK ONE)

☐ (A) referred to in United States Patent Number 5,623,065 column \_\_\_\_\_☐ (B) referred to in an application that is open to public inspection as set forth in 37 CFR 1.11, i.e., Application No. \_\_\_\_\_, filed \_\_\_\_\_, on page \_\_\_\_\_ of paper number \_\_\_\_\_☐ (C) an application that claims the benefit of the filing date of an application that is open to public inspection, i.e., Application No. \_\_\_\_\_, filed \_\_\_\_\_, or☐ (D) an application in which the applicant has filed an authorization to lay open the complete application to the public.

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US005623065A

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**United States Patent** [19]

Cook et al.

[11] **Patent Number:** 5,623,065[45] **Date of Patent:** Apr. 22, 1997[54] **GAPPED 2' MODIFIED OLIGONUCLEOTIDES**[75] Inventors: **Phillip D. Cook, Vista; Brett P. Monia, Carlsbad, both of Calif.**[73] Assignee: **Isis Pharmaceuticals, Inc., Carlsbad, Calif.**[21] Appl. No.: **244,993**[22] PCT Filed: **Dec. 23, 1992**[86] PCT No.: **PCT/US92/11339**§ 371 Date: **Jun. 21, 1994**§ 102(e) Date: **Jun. 21, 1994**[87] PCT Pub. No.: **WO93/11339**PCT Pub. Date: **Jul. 8, 1993****Related U.S. Application Data**

[63] Continuation-in-part of Ser. No. 814,961, Dec. 24, 1991, abandoned, and Ser. No. 566,977, Aug. 13, 1990, abandoned.

[51] Int. Cl.<sup>6</sup> ..... **C07H 21/00; C07H 21/02; C07H 21/04**[52] U.S. Cl. .... **536/23.1; 536/23.2; 536/23.5; 536/23.51; 536/23.52; 536/23.53; 536/25.1; 536/25.2; 435/91.1; 435/91.2; 435/91.5; 935/6; 935/9; 935/10**[58] Field of Search ..... **514/44; 536/23.1; 536/23.2; 23.5; 23.51; 23.52; 23.53; 25.1; 25.2; 435/91.1; 91.2; 91.4; 91.5; 935/9; 6, 10**[56] **References Cited****U.S. PATENT DOCUMENTS**

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[57] **ABSTRACT**

Oligonucleotides and other macromolecules are provided that have increased nuclease resistance, substituent groups for increasing binding affinity to complementary strand, and subsequences of 2'-deoxy-erythro-pentofuranosyl nucleotides that activate RNase H enzyme. Such oligonucleotides and macromolecules are useful for diagnostics and other research purposes, for modulating protein in organisms, and for the diagnosis, detection and treatment of other conditions susceptible to antisense therapeutics.